XXXVI.—Notes on the Birds of Alcudia, Majorca. By Captain P. W. Munn, F.Z.S., M.B.O.U.

(Plate VIII.)

THE following notes were made during a stay in Majorca, Balearie Islands, from November 1919 until May 1920, and from October 1920 until June 1921.

I chose as my headquarters the Port of Alcudia, a tiny fishing village and port, a mile and a half from the town of that name. Here there was a clean and comfortable little hostel—the "Hotel Marina." Other parts of the island were also visited as well as Minorca.

Puerto Alcudia (see map, Pl. VIII.) is possibly the most likely spot in Majorca for birds—the shores of the beautiful bay, the pine-woods, the Albufera and marshes, and the crags and cliffs on the peninsula, being apparently ideal localities, and the ever-present quantity of water in the marshes and streams adjacent, besides a lesser area of cultivated land than in other parts, make it more attractive.

The island is, however, a somewhat disappointing place for an ornithologist: there are, certainly, a good many birds, especially on migration, but comparatively few of any great interest, in addition they are unusually wild and shy. Also the strenuous work of climbing the rocky hills, when day after day nothing new or of interest is seen, takes a lot of time with but meagre results. The sandy shores and sandbanks of the bay are ideal for shore- and sea-birds; but of the former only the Kentish Plover is common, of the latter, Gulls are few, and of Terns there are none. The pine-woods and the crags and caverns in the hills are most suitable for birds of prey, but few are present; the cliffs on the sea-coast should teem with sea-bird life, but they are comparatively barren.

The Bay of Alcudia is fringed, most of the way round next the sandy shore, with a belt of sand-dunes of varying width, overgrown with beautiful woods of pine, of no great size as



Map of the North-East part of Majorca

a rule, with a thick undergrowth of juniper, myrtle, rosemary, heather, etc., in places densely bound together with a tangle of Smilax aspersa—a tough, thorny creeper, as difficult to get through as barbed wire. Behind the sanddunes, nearest Puerta Alcudia and to the west of it, is an extent of marshland, covered with spear-grass, samphire, and coarse herbage, among which are several shallow lagoons. Behind this marshland, and farther west, are low hills with woods of splendid pine-trees among them—the outlying spurs of the high mountainous country in the north. Beyond the sweep of the bay is the Albufera-a large tract of swamp, entirely under water, covered with a dense growth of reeds and intersected with numerous canals and streams. which all run into the sea through a large canal nearly in the centre of the bay. An attempt was made many years ago to drain this Albufera, in order to grow rice and cotton, and most elaborate roads, dykes, and pumping-stations were constructed; but the work was relinquished, and most of the dykes and buildings are now neglected and in ruins. A small quantity of rice, however, is still grown in the fringes of the marsh, and a prosperous paper-mill flourishes in the centre, where paper is made from the reeds growing in the marsh. Beyond the Albufera, sand-dunes, pinewoods, and heath-land extend inland as far as Santa Margarita, among which are some fine torrentes; then comes the bare, rocky, scrub-covered country at the foot of the mountains round Arta to Cabo Farruch.

East of Alcudia is the peninsula between the bays of Pollensa and Alcudia—a tract of wild mountainous country, rising to a height of 1500 feet at the Atalaya de Alcudia, with beautiful pine-woods and gorges, bold crags and precipices, and some fine coast scenery, culminating in the Cabo del Pinar—a low pine-covered cape—and the bare, forbidding cliffs of the Cabo de Menorca.

At the western end of the Bay of Pollensa is a smaller marsh, called the Albuferete, which takes all the streams flowing eastwards from the mountains behind Pollensa. The peninsula on the northern shore of Pollensa Bay is a narrow ridge of mountains, rising to 1300 feet at Fomentor and culminating in the cape of that name.

Cultivated country in this district only extends around the towns of Aleudia and Pollensa, behind the Albuferete, on the slopes of the lower hills of the peninsulas, and also on the northern and western fringes of the Albufera.

In the cultivated country there is a network of narrow lanes shut in with stone walls, and many of these lanes are most picturesque.

The district thoroughly worked and explored is that to the east, and seawards, of a line from Pollensa to La Puebla, thence to Santa Margarita, and on to the neighbourhood of Arta. The observations, I think, may be considered fairly applicable to the greater part of the island, with the exception, perhaps, of the mountainous region of the north; but I found that the results in the mountains were so very meagre compared with the arduous work necessary to accomplish them, that I doubt if it is worth while exploring this northern range thoroughly.

There is a great deal of migration in the island, and during November and April especially there were streams of common migrants.

In the neighbourhood of Palma, numbers of birds are killed and sold in the market for food during the winter. Besides Game-birds, I saw there Thrushes, Redwings, Blackbirds, Starlings, Linnets, Serins, Siskins, Goldfinches, Greenfinches, Chaffinches, Robins; and fewer Fieldfares, Ring-Ouzels, Redstarts, Blackstarts, White Wagtails, Meadow-Pipits, and even Sardinian Warblers, Goldcrests, Chiffchaffs, and Blackcaps.

The birds, as a rule, sing little and feebly, the Sardinian Warbler and Nightingale being the most noisy, though the Blackbird in the spring chimes in.

I have described rather fully the nests and eggs of some of the birds, as it appears that little collecting of the eggs of Majorean birds has hitherto been done.

The inhabitants are very friendly and courteous, but do not take much interest in the doings of the foreigner among

them. They have little knowledge of the birds or of the natural history of their district, and are not interested as a rule in natural objects; even the shepherd boys, who spend the whole day in the country with their flocks, take very little notice of the birds around them: little reliance can, therefore, be placed on their statements.

The weather from October 1920 until May 1921 was so abnormally bad and unsettled that the movements of birds, and especially their times of nesting, were most irregular.

There is a small collection of mounted birds in the Instituto Balear in Palma, but this—like that at Mahon in Minorca—is of little value owing to absence of data.

Cultivation in Majorca has of late years so extended, and the character of the island so altered, particularly by the drainage of some of the marshes, that many of the notes of earlier observers are not now applicable. As an instance, a large marsh called El Prat, situated a short distance to the south-east of Palma, has entirely disappeared, and others have been much curtailed by the advance of cultivation around their margins.

A. von Homeyer visited the Balearic Isles in 1861 from the middle of April until the middle of May, and his observations appeared in the 'Journal für Ornithologie' in 1862 and 1864; many of his statements, however, could only have been from hearsay.

Barcelo wrote in 1866; many of his notes were not from his own observations, and are questionable.

Howard Saunders published in 'The Ibis' of 1871 (pp. 54-68, 205-225, 384-402), in a list of the Birds of Southern Spain, a number of notes of his observations on the Birds of Majorea.

The Archduke Ludwig Salvador published various volumes between 1869 and 1891 on the Natural History, etc., of Majorca.

The most complete list hitherto published is that by Dr. A. von Jordans in 'Falco' of 1 August, 1914. He spent March, April, and May, 1913, in the islands, and

species that he did not himself observe he has added on the authority of earlier writers.

Dr. Philip Gosse visited the islands in April 1914 and Mr. H. F. Witherby in June and July 1919, and to both these gentlemen I am indebted for much useful information.

The Rev. F. C. R. Jourdain has kindly furnished me with notes on many of the eggs I have collected.

To my own observations I have added those species that I have not myself observed, with the references to the above earlier writers, but have preferred to omit any statements made by them which at the present time might be misleading.

Minorea is a still more disappointing island for an ornithologist. There is at Port Mahon an interesting museum in the Literary and Scientific Institute, with a collection of birds said to have been obtained in the islands, and catalogued by Senor Ponseti. About five miles from Port Mahon is a series of lakes, called the Albufera, among low scrub-covered hills near the sea, which is the most likely spot for birds that I saw, and where there were, at the end of March 1920, large flocks of Coots, some Mallards, and a few pairs of Tufted Duck. In the centre of the island, between Mercadel and Ferrarias, the hills are higher and more wooded and the country more inviting-looking. Blue Rock-Thrushes were plentiful and said to be resident; Puffinus kuhli and P. yelkouan * nest on many parts of the coast of the island as well as on the adjacent islets.

From the position of the islands, midway between the coasts of southern Europe and northern Africa, there is every probability that other species besides those already recorded may be observed on passage; and the recesses of the Albufera and other marshes, and the remoter parts of the mountains in Majorca, may yield, perhaps, a few more species during the nesting-season.

^{*} Probably Puffinus p. mauretanicus Lowe, Bull. B. O. C. xli. 1921, p. 140.

1. Corvus corax hispanus. Raven.

A common resident. A good many nest in the crags of the peninsula of Alcudia, preferring inland situations among the hills to the cliffs of the coast. Several pairs sometimes nest in the same neighbourhood; in one gorge on 22 March, 1920, I found two nests on bluffs about 100 yards apart, one of which contained young ones, and on the other the bird was sitting and refused to move. The first nest was on an open shelf of rock and the other in a small cavern, and though not easily accessible, both nests could be seen into from the adjoining hillsides. In 1921 one only of these nests was occupied. In another range of cliffs three pairs were nesting not far from each other. They frequently associate in the winter in considerable flocks, and I have seen assemblies of from twenty to fifty individuals attracted by some common food.

Obtained by v. Jordans, who distinguishes this subspecies from C. c. tingitanus and C. c. sardus.

- 2. Corvus corone. Carrion-Crow.
- 3. Corvus cornix. Hooded Crow.

Included in v. Jordans' list; but though both these species may occur on migration (and Gosse thought he saw a Carrion-Crow in 1914), no specimen has yet been obtained, nor have they been found to nest in the island.

4. Corvus frugilegus. Rook.

Included by v. Jordans on Barcelo's authority. I have never seen this species in the island, but Gosse has noticed it. There is no reason why it should not occur on passage.

5. Pyrrhocorax pyrrhocorax. Chough.

Included by v. Jordans on the authority of Barcelo.

6. Sturnus vulgaris. Starling.

Starlings only frequent the district in the winter and early spring. In 1919-20 a few small parties frequented Albufera and neighbourhood up to the middle of March, but in 1920-21 vast flocks were found in many parts of the island. It is included in v. Jordans' list.

7. Sturnus unicolor. Sardinian Starling.

Included in v. Jordans' list on the authority of Barcelo, Howard Saunders, and the Archduke Ludwig Salvador.

8. Oriolus oriolus. Golden Oriole.

A visitor in small numbers in the summer, when a few probably remain to nest. I saw a male on 24 April, 1921, near Puerto Alendia.

Observed by v. Jordans.

9. Chloris c. aurantiiventris. Greenfineh.

Resident and common. They commence laying about the middle of April, nests being built chiefly in pines and wild olive-trees. Both nests and eggs are similar to those of the British race, though the eggs are usually somewhat smaller.

Obtained by v. Jordans, who states it is nowhere plentiful.

10. Coccothraustes coccothraustes. Hawfinch.

Not observed by v. Jordans, who quotes Barcelo and Homeyer, but he saw a stuffed specimen in Arta obtained in 1912.

11. Carduelis carduelis africana. Goldfinch.

One of the commonest birds all the year round, and the species most frequently kept in cages. They find abundant food in the thistles and weeds that flourish everywhere. Nesting plentifully in the pine-woods, in the orchards, and in the wild olive-trees on the hillsides. Often their nests are built in the curtains of *Smilax aspersa*, which forms such impenetrable barriers in some parts of the woods. The earliest eggs are laid about the middle of April, and the nests are the usual beautiful structures of lichen, moss, and fine twigs outside, thickly lined with vegetable down, a few feathers, and a little palmeto fibre closely felted together. The birds always show considerable excitement at their nest and sit very closely on their eggs.

Included in v. Jordans' list under the name of Carduelis c. parva. Witherby considers those obtained by him to be referable to C. c. africana.

12. Spinus spinus. Siskin.

Common during the winter in considerable flocks, but apparently none remain to breed.

Von Jordans quotes Barcelo in his list.

13. Spinus citrinella. Citril Fineh.

Von Jordans includes this species on the authority of Barcelo.

14. Serinus serinus. Serin.

A common species throughout the year, assembling in flocks in the winter. They resort to the pine-woods and orchards for nesting early in April, and I found a nest containing tiny young ones on 26 April, 1920, and on the same day another nest which the birds were building. The nest is usually placed in the first fork of a small pine, and is a most beautiful little structure of twigs and moss, thickly lined with feathers.

Obtained by v. Jordans.

15. Passer domesticus. House-Sparrow.

A common resident, but at present not very abundant, though, owing to increased cultivation, it is annually becoming more plentiful. A good many nest in the rocky sides of a ruined subterranean chapel out in the open country near Alcudia, at some distance from dwellings.

Obtained by v. Jordans. Witherby found many breeding in a cliff near Lluch.

16. Passer italiæ. Italian Sparrow.

Included in v. Jordans' list on the authority of Homeyer, but its occurrence is very doubtful.

17. Passer montanus. Tree-Sparrow.

Von Jordans includes this species on the authority of Barcelo and others, but I have never yet observed it.

18. Fringilla cœlebs. Chaffineh.

Extremely plentiful all the year. Numbers nest in the pine-woods, in the orchards, and, less plentifully, among the hills. They commence building early in April. The song is harsh and feeble.

19. Fringilla montifringilla. Brambling.

Von Jordans includes this species on the authority of Barcelo, and says it has occurred in hard winters.

20. Petronia petronia. Rock-Sparrow.

Von Jordans obtained specimens.

21. Acanthis cannabina mediterranea. Linnet.

Very common all the year, and abounds in large flocks during the winter, many of which are not dispersed even in May. They build in much the same situation as at home, chiefly in bushes and hedges, but also in pine-trees. The first eggs were taken on 25 April, 1920, but they are rather late breeders.

Obtained by v. Jordans.

22. Acanthis linaria cabaret. Lesser Redpoll.

Included in v. Jordans' list on the authority of Barcelo.

23. Loxia curvirostra balearica. Crossbill.

I found Crossbills were present wherever pine-woods abounded in any extent, and they were by no means uncommon. I sought them chiefly in the pine-woods on the shore, as the trees were smaller there; but they were found equally in the woods among the hills, where the trees were of considerable size, and there were always some about among the woods surrounding Bellver Castle at Palma.

They are comparatively tame birds, and not easily disturbed either when feeding or at their nests, and often remain perched quietly overhead in a tree while one passes beneath; but when thoroughly alarmed, they fly away to a considerable distance. A cock bird may frequently be seen perched conspicuously on the topmost spray of a pine-tree, chirping loudly to his partner or to the rest of his party feeding among the boughs of the trees near by; or the whole party may be feeding amicably together, chattering pleasantly all the time. When pairing they sometimes indulge in unseemly squabbles among the pines like sparrows, and make nearly as much noise about it.

They are extremely fond of bathing, and I have watched

them washing themselves in the pools around the lagoons near Alcadia, and in the water-courses in the hills, when they so thoroughly soak themselves that they can only fly as far as the nearest tree to dry and preen their feathers.

In 1919 they had paired in the beginning of December, and some were evidently building in January 1920, but I did not find a completed nest until I April, 1920, and this contained four fresh eggs. The female did not leave the nest until the tree was struck, and the pair flew closely around, chirping vigorously while the tree was being climbed. It was built in a fork of a lateral branch of a small pine—a similar position to all other nests I found,—and was a platform of pine twigs on which was a compact cup of grass, fibre, and a little hair. The eggs were white, rather faintly spotted with different shades of brown, one specimen hardly showing any markings at all.

On the same day I found three other nests being built in exactly similar positions, at each of which was its pair of birds; but on 10 April 1 found a nest from which the young had flown some weeks before, and on 26 April a female with two fully-grown ones was seen feeding quite tamely, low down among the small pines. Crossbills had evidently nested in the district the preceding year, judging by the number of old nests which were found.

The eggs of this subspecies have not been taken before.

During the extremely wet and unsettled winter of 1920-21, Crossbills did not appear in the district until the beginning of January 1921, nor did I see any in other parts of the island until then. They then appeared in numbers, and were as plentiful as usual in all suitable localities, and commenced pairing immediately. The natives say that in bad winters they go to Africa.

Obtained by v. Jordans.

24. Emberiza calandra. Corn-Bunting.

A resident, but not very plentiful; a considerable increase in its numbers takes place from the end of January, but it is generally noticed singly or in pairs. I took a nest with five eggs on 4 May, 1921, built at the foot of a small pine in the woods near the shore among herbage; and this appears to be the usual situation.

Obtained by v. Jordans.

25. Emberiza cirlus. Cirl Bunting.

A resident, universally distributed but nowhere plentiful. Obtained by v. Jordans.

26. Emberiza hortulana. Ortolan Bunting.

Obtained by v. Jordans.

27. Emberiza palustris. Reed-Bunting.

A Reed-Bunting is common during the winter in suitable localities, and a few remain throughout the year. Hitherto I had considered them to be typical Reed-Buntings, but Witherby informs me that a male I obtained on 25 March, 1921, is a form of *E. palustris*, but is not referable to any known subspecies, and until more specimens are obtained it must remain uncertain what form inhabits the island.

Von Jordans did not observe it, but includes it in his list on the authority of Barcelo under the name of *E. schwniclus*.

28. Alauda arvensis. Sky-Lark.

Common during the winter, and a few probably remain throughout the year. On 26 February, 1920, when on a ship some distance off the north coast of the island, I saw one flying northwards.

Not observed by v. Jordans, who quotes Barcelo.

29. Lullula arborea. Wood-Lark.

First noticed in the middle of April, so probably it is a summer visitor only, but it is not plentiful.

Not observed by v. Jordans, who quotes Barcelo.

30. Alauda duponti. Dupont's Lark.

Von Jordans makes some remarks on this species in his list, but there is no record of its occurrence in the island.

31. Galerida theklæ theklæ. Crested Lark.

Generally distributed throughout the district, but in no great quantities. It is to be found in the pine-woods near the shore, on the bare, rocky hillsides, among the olive orchards, on the open fields, and even among the rocks on the seashore. A nest with two eggs was taken on 29 April, 1920, on rough, rocky ground on a hillside.

Obtained by v. Jordans. Witherby considers that those he obtained in Majorea do not differ from the typical form, but the Iviza bird (G. t. polatzeki) appears to have a finer bill.

32. Calandrella brachydactyla. Short-toed Lark.

The Short-toed Lark is very plentiful in the marshes and fields close to Puerto Alcudia from the beginning of April. A nest with three eggs was found on 24 April, 1920, in the marshes on a dry spot among short herbage—a beautiful little cup-shaped hollow, sunk deeply in the ground, thinly lined with grass and a little seaweed. Other nests found had been destroyed by the sheep and goats, or rooted up by the pigs which feed in the marshes.

Obtained by v. Jordans.

33. Motacilla alba. White Wagtail.

Very common during the winter, following the plough, feeding on the fields and roads and in the marshes. The majority leave in April, but one or two pairs remain in the district in the summer and possibly breed there.

Obtained by v. Jordans.

34. Motacilla cinerea. Grey Wagtail.

A common species during the winter in the marshes and wherever water is to be found; but as most of the water-courses in the hills are dry in the summer, I do not think any remain to nest unless the winter has been a wet one. Even in the Albufera, where there is always plenty of water, none were seen after early spring.

Some young ones were seen in the cloisters of the cathedral at Barcelona on 11 May, 1920.

35. Motacilla flava flava. Blue-headed Wagtail.

One of the commonest and most conspicuous of the summer visitors. The earliest one was noticed on 8 March, 1921, and ten days later they had arrived in numbers. The male birds, perched on the tops of spear-grass and samphire, are as brilliant and noticeable as Bee-eaters. The first nest was found with two eggs on 6 April, 1920, in a damp spot in the marshes under a tuft of samphire. Other nests were found among grass in drier parts of the marshes, and the birds also nested among the pine-woods on the shore. A great many nests are destroyed by the cattle in the open, and the birds may be seen flying distractedly around the sheep and goats in their nesting-haunts; hence they are driven to nest among the pines for greater security.

Obtained by v. Jordans.

36. Motacilla flava borealis. Grey-headed Wagtail. Obtained by v. Jordans.

37. Anthus pratensis. Meadow-Pipit.

A very common bird in the marshes and fields during the winter; a few remain during the early summer, but I did not discover that they were nesting.

Obtained by v. Jordans.

38. Anthus trivialis.

I did not notice any Tree-Pipits, but Dr. Gosse saw one at Alcudia in April 1914, and v. Jordans obtained the species.

39. Anthus campestris. Tawny Pipit.

A common summer visitor, the earliest being noted on 27 March, 1921; but the majority arrive in the middle of April. They are late breeders.

Obtained by v. Jordans.

40. Certhia brachydactyla. Tree-Creeper.

41. Sitta cæsia. Nuthateh.

Though v. Jordans has included these species in his list with Barcelo's remarks, they might well be omitted, as there is no record of their occurrence by any modern observer.

42. Regulus r. regulus. Goldcrest.

Common during the winter and particularly numerous in November, but leaves the district entirely in the spring. They were plentiful in the pine-woods on the shore and among the hills, even up to the limit of the tree-growth on the wind-swept Cabo de Menorca. As tame and confiding a little bird as in other countries, and this is remarkable in Majorca, where the birds are usually shy and wild. One obtained by me is considered by Witherby to be of the typical form.

Von Jordans did not observe this species, but quotes

Barcelo.

43. Regulus ignicapillus. Firecrest.

Not at all uncommon during the winter in similar localities to the Goldcrest, but it is a much shyer and more restless bird, whose habits more resemble Chiffchaffs or Willow-Wrens. I usually noticed them in pairs.

Included in v. Jordans' list.

44. Parus major. Great Titmouse.

A resident, universally distributed but not common. A nest was found on 30 April, 1920, in a hole in an olive-tree, with five fresh eggs; both the eggs and nest were exactly similar to the British species, and I was unable to detect any difference either in the note or habits of the bird.

Von Jordans includes this in his list under the name P.m. mallorew Jordans, but Witherby thinks the bird cannot be distinguished from P.m. aphrodite.

45. Parus ater. Coal-Titmouse.

Von Jordans includes this species in his list with Barcelo's remarks; it might well be omitted.

46. Parus cæruleus. Blue Titmouse.

Von Jordans obtained specimens of the Blue Titmouse and named it *P. c. balearicus*. Witherby also noticed it; but it cannot be as universally distributed as the Great Tir, for I have not yet come across it anywhere.

47. Lanius senator. Woodchat.

Von Jordans obtained specimens.

48. Lanius senator badius. Corsican Woodchat.

A common and conspicuous summer visitor, whose extraordinary variety of notes is most confusing to the naturalist. The earliest arrival was noticed on 30 March, 1921, but one of their "larders" was found on 1 April, 1920-several beetles and other insects impaled on the thorns of a pomegranate bush on the edge of the Albufera. The first nest was taken on 26 April, 1920, and these were invariably built among the ends of the lower branches of small pinetrees. Two nests I found in a row of scattered pine-trees near the shore were not 100 yards apart. There is little attempt at concealment, and the bird sits closely. The nests are bulky, strongly-made structures, composed externally of pieces of an aromatic plant with the yellow blossoms attached, and lined with grass, cotton-grass blossoms, a few feathers, and odds and ends of paper, fibre, etc. Five handsome evenly-marked eggs are usually laid, of a pale greyishwhite ground-colour zoned with brown, and grey blotches and spots of varying shades at the larger end. I only noticed this species on the low ground; it did not appear to frequent the hills.

Obtained by v. Jordans.

49. Lanius meridionalis. Southern Great Grey Shrike.

Von Jordans includes this in his list on the strength of a specimen in the Instituto Balear in Palma.

50. Sylvia communis. Whitethroat.

A summer visitor, arriving in April, but not common. Obtained by v. Jordans.

51. Sylvia curruca Lesser Whitethroat. Gosse observed a specimen at Alcudia on 7 April, 1914.

52. Sylvia simplex. Garden-Warbler.

A summer visitor, but not common. I saw the first on 19 March, 1920.

Not observed by v. Jordans, who quotes Homeyer.

53. Sylvia atricapilla. Blackeap.

A summer visitor and common, the greater number arriving in April, but in 1921 there was a considerable immigration at the beginning of March. A few remain throughout the winter. They haunt the gardens and orchards and nest in the bramble and myrtle-brakes among the gorges of the pine-woods in the hills.

Obtained by v. Jordans.

54. Sylvia melanocephala. Sardinian Warbler.

One of the commonest birds; found everywhere all the year round, and where no other bird is to be seen, the Blackheaded Warbler is sure to be there—even among the sparse palmetto-scrub on the tops of the bare hills, or the few scattered clumps of pines growing in inaccessible spots among the crags, as well as in orchards, gardens, and pinewoods. They nest abundantly in every conceivable situation, but always low down, their favourite spots being dense clumps of butcher's broom, myrtle-thickets, palmetto-scrub, brambles, and roadside bushes. Often the same site is resorted to annually, but damp or marshy situations are not favoured. Their nests vary considerably, some being neat, compact structures, and others bulky and rather untidy; all are made of grass externally, with invariably a pad of cottongrass blossoms or vegetable down of some kind, in which the lining of fine grass or fibre is set. The eggs also vary much, the commonest type having a pale greenish ground, with greyish specks of various shades. A very handsome type has a whitish ground, with spots or blotches of dark red, or purple or brown-in fact, without identifying the birds, these handsome eggs might belong to another species. There is never any difficulty in being able to identify the birds, however, as they are always in evidence near their nest and sit closely, the male taking his turn with the female; when the young are hatched the parent birds make a curious "purring" noise, something like the subdued chatter of a Wren or the "churring" of a distant Nightjar. The usual number of eggs laid is three or four, and more

often than not one of the eggs remain unhatched, which accounts for the number of old nests found with one bad egg. The first eggs were found on 4 April, 1920, and though unfinished nests were met with at the end of April, in others the young were nearly ready to fly at the beginning of May.

Obtained by v. Jordans.

55. Sylvia cantillans. Sub-Alpine Warbler. Von Jordans obtained a specimen.

56. Sylvia orphea. Orphean Warbler.

A summer visitor, arriving at the end of March or beginning of April, but not common. They chiefly frequent the pine-woods near the shore, where they feed quietly among the upper branches. I have found old nests in the forks of the smaller pine-trees.

Von Jordans remarks on a note of Barcelo's concerning this species.

57. Melizophilus undatus. Dartford Warbler.

Von Jordans obtained a specimen.

58. Sylvia sarda balearica. Marmora's Warbler.

Specimens have been obtained by v. Jordans and Witherby. Both the above are resident, and though I have not yet obtained examples, I have observed them both in winter and summer. They are occasionally for sale in the market in Palma.

59. Cettia cetti. Cetti's Warbler.

Obtained by v. Jordans and noticed by Witherby. Von Jordans separates it under the name C. c. salvatoris.

60. Acrocephalus streperus. Reed-Warbler.

An abundant resident in the Albufera, where it breeds, not only in the marsh itself, but in the ditches and hedges adjoining. Owing to the chorus of croaking frogs in the spring and summer in the Albufera, it is not easy to trace birds by their notes, but the Reed-Warbler's songs can be

distinguished, especially when they are pairing early in the spring.

It is remarkable that this species has not been before recorded from Majorca, considering its abundance in suitable localities.

61. Acrocephalus arundinaceus. Great Reed-Warbler.

Von Jordans quotes Homeyer and Barcelo for the occurrence of this species.

62. Acrocephalus schenobenus. Sedge-Warbler.

Occurs in the Albufera, but I did not notice any before the middle of March.

63. Acrocephalus aquaticus. Aquatic Warbler.

Noted as occurring in the Albufera during the winter, but I have no record of any seen in the summer.

64. Lusciniola m. melanopogon. Moustached Warbler.

A plentiful resident in the Albufera, where its song is heard on all sides, commencing with a loud note, very like a Redshank's, and continuing with a song not unlike a Sedge-Warbler's.

This species has not before been recorded from Majorca. Witherby, who has examined examples obtained by me, states that they do not differ from the typical form.

65. Phylloscopus trochilus. Willow-Warbler.

66. Phylloscopus sibilatrix. Wood-Warbler.

Both species noted during the winter, but all leave the district in the spring.

67. Phylloscopus collybita. Chiffeliaff.

Chiffchaffs swarm in the district during the winter—in the orchards, among the cabbage crops, in the pine-woods; and on the sunny outskirts of the pine-woods on the shore they flit about in small parties. All, however, leave the district at the beginning of March.

One found its way into a lobster-pot lying on the quay at Puerto Alcudia, and was captured.

These birds are known to the natives as "birds of the snow," because in cold weather they often come into the houses.

Von Jordans obtained specimens of the three above-named species.

68. Phylloscopus bonelli. Bonelli's Warbler.

Included in v. Jordans' list on the authority of Homeyer and Barcelo.

69. Cisticola c. cisticola. Fantail Warbler.

A common resident species, very plentiful in winter but not quite so abundant during the summer. They commence nesting at the end of March and beginning of April, and the nests, carefully concealed among grass, samphire, or spear grass, are deep pockets of cobwebs, down, etc., like the web of some insect.

I have found two types of egg—one pure white, the other pale blue. The Majorean name for this bird is "Ooyee de Bau," meaning "eye of an ox."

Obtained by v. Jordans.

70. Turdus viscivorus. Missel-Thrush.

Not uncommon during the winter, frequenting the old olive orchards and scattered trees on the hillsides.

Not observed by v. Jordans, who quotes Barcelo.

71. Turdus philomelus. Song-Thrush.

Very abundant during the winter and universally distributed, but after the beginning of April very few are left in the district, and apparently none remain to breed. Great numbers are killed for food and sold in the markets, with Redwings and Blackbirds and a few Fieldfares and Ring-Ouzels, and an occasional Blue Rock-Thrush.

Von Jordans noticed a specimen in May in Cabrera.

72. Turdus musicus. Redwing.

Plentiful during the winter, and, like the Fieldfares, they frequent the old olive orchards and trees on the scrub-covered hillsides.

Included in v. Jordans' list on the authority of Barcelo and a stuffed specimen in Palma.

73. Turdus pilaris. Fieldfare.

Not so numerous as the Redwing, but still not uncommon in the winter.

In v. Jordans' list, Barcelo is the authority given for its occurrence.

74. Turdus merula. Blackbird.

Very common, universally distributed, and resident, but unusually shy and wary. They commence nesting early in March, and the nest is frequently placed in the fork of a pine-tree, also in bushes and among brambles; in creepers against the trunk of a tree is a favourite situation. The nests are usually rather small, and seaweed is often used in their construction. Three eggs are most often laid, but four is not unusual. I found young ones hatched on 23 April, 1920. The shepherd-boys catch them, with thrushes, in traps constructed like our brick-traps, but of pieces of stone and baited with berries. The song is rather weak, and on the whole they sing very little. In May 1921 I found a nest on the ground, among herbage, that contained eggs.

Obtained by v. Jordans.

75. Turdus torquatus. Ring-Ouzel.

A winter visitor, but not very common, frequenting the wooded gorges in the hills and the scrub-covered hillsides near the seashore.

Von Jordans quotes Barcelo as the authority for its occurrence, and noted stuffed specimens in Palma.

76. Monticola cyanus. Blue Rock-Thrush.

Rock-Thrushes had arrived in numbers by 22 March, 1920, and were not uncommon in the wild rocky gorges among the hills. An old nest was found in a crevice of a rock near the Atalaya de Alcudia. A few remain throughout the winter.

Obtained by v. Jordans.

77. Monticola saxatilis. Rock-Thrush.

I did not certainly identify this species, but on 3 April, 1920, saw a bird which I think must have been a Rock-Thrush, in a bare, rocky gorge, flying upwards into the air from its perch on a ridge of rocks, uttering its song, and returning again to the same place.

Obtained by v. Jordans.

78. Phænicurus phænicurus. Redstart.

Plentiful during the winter, chiefly in the orchards, but few noticed later than March. In April 1921 many adult males passed through the district. Some probably remain to breed.

Obtained by v. Jordans.

79. Phenicurus gibraltariensis. Black Redstart.

Not at all uncommon during the winter, but all had left in March. Adult males occur chiefly in the spring.

Obtained by v. Jordans.

80. Erithacus r. rubecula. Redbreast.

Very common and universally distributed during the winter. Arriving with the Song-Thrushes in October and leaving with them in April. I think it possible that a few remain to breed. Many are sold in Palma market, with other small birds, for food, and on their arrival in October they are always very fat.

Observed by v. Jordans. Witherby states that specimens obtained in October and April belong to the typical form.

81. Luscinia megarhyucha. Nightingale.

Arrives in the district at the beginning of April, and is very common. It is practically the only bird that sings fearlessly, and may be heard day and night in the plantations, patches of bush, and among the pine-wood and also in gardens. They nest in April and May in myrtle and bramble-brakes, as well as in clumps of palmetto, and are particularly fond of the thickly-wooded gorges among the hills.

Observed by v. Jordans.

82. Cyanosylvia suecica cyanecula. White-spotted Blue-throat.

Observed by v. Jordans.

83. Saxicola rubicola. Stonechat.

A very common resident, and one of the most noticeable birds everywhere. They nest early in March, hard-set eggs being found on 18 March, 1920, and young ones seen flying on 19 April. Nests in the marshes are usually built under a tuft of samphire or low down in a bush, but they also build in the pine-woods on the shore. Seaweed is often used in the construction of their nests, and palmetto-fibre chiefly as a lining. The eggs are usually rather smaller than British specimens.

Observed by v. Jordans. Witherby states that specimens obtained by Gosse are of the Continental form S. r. rubicola.

84. Saxicola rubetra. Whinchat.

A summer visitor, arriving at the beginning of April, but not very common.

Obtained by v. Jordans.

85. Enanthe enanthe. Wheatear.

A common bird on passage, both in spring and autumn, and remaining for some weeks in the district at both seasons. A few stragglers occur during the winter, and possibly some remain to breed, for I found an old nest in a rabbit-burrow, near Puerto Alcudia, in 1921.

86. Enanthe & leucorrhoa. Greenland Wheatear.

Obtained by v. Jordans and by Gosse.

87. Enanthe hispanica. Black-eared Wheateur.

A specimen was seen near Puerto Alcudia on 12 April, 1921, evidently on migration.

Obtained by v. Jordans.

88. Accentor modularis. Hedge-Sparrow.

Searce; a few examples have been observed during the winter only, in the pine-woods on the shore and among the hills.

Obtained by v. Jordans.

89. Troglodytes t. kabylorum. Wren.

Not very common, and extremely shy. It is a resident, and its numbers do not seem to vary at all with the seasons. They are generally found in the pine-woods near the shore, and among the mountains, and more rarely among scrub on the hillsides, in rocky gorges, and even on the desolate Cabo del Pinar. Their nests are usually built quite near the ground, among dense undergrowth against the trunk of a pine-tree, in juniper and rosemary bushes, frequently in clumps of palmetto and dense smilax thickets, and rarely in clefts of the rocks. They are composed of moss, with often a lot of seaweed, or the dry leaves of a very prickly thistle, outside, lined with feathers and hair or palmetto-fibre. I found one nest lined thickly with feathers taken from the carcass of a Barn-Owl lying near. The eggs are white, with red spots of more or less intense colouring, but are generally smaller than those of the British species.

Obtained by v. Jordans, and Witherby considers that specimens he obtained belong to this form.

90. Muscicapa striata. Spotted Flycatcher.

A common summer visitor, arriving in the latter part of April. They frequent chiefly the pine-woods among the hills, as well as the olive orchards, and though these woodland birds are usually shy, those which frequent the vicinity of houses become as tame and familiar as at home, and frequently build their nests in sheds, outhouses, and even in the houses themselves.

Obtained by v. Jordans, who has named the bird M. s. balearica.

- 91. Muscicapa hypoleuca. Pied Flycatcher. Obtained by v. Jordans.
- 92. Muscicapa collaris. White-collared Flycatcher. Included in v. Jordans' list on the authority of Barcelo.
- 93. Hirundo rustica. Swallow. Fairly plentiful in summer; the earliest arrivals were

noted at the end of February, but the majority arrive in March. A few stragglers occur during the winter.

Obtained by v. Jordans.

94. Delichon urbica. Martin.

Fairly common in summer, arriving early in April, but in by no means in such great numbers as in parts of the Spanish mainland.

Obtained by v. Jordans.

95. Riparia riparia. Sand-Martin.

A summer visitor, arriving in April, but local and not very numerous. There are a few small colonies at suitable spots in the island, and odd pairs are found among the sandhills on the shore of Alcudia Bay.

Obtained by v. Jordans.

96. Riparia rupestris. Rock-Martin.

Obtained by v. Jordans and Witherby.

97. Iynx torquilla. Wryneck.

A resident, but not plentiful. Their numbers are considerably increased by migrants in April.

Obtained by v. Jordans.

98. Cuculus canorus. Cuckoo.

A summer visitor, not very plentiful, arriving in March or in backward seasons in April. On warm spring nights Cuckoos may be heard calling from the hills behind Puerto Alcudia, Nightingales singing and Stone-Curlews clamouring from across the bay, while Bitterns "boom" continually in the Albufera.

Obtained by v. Jordans.

99. Micropus apus. Swift.

Swifts arrive early in April, and career in hundreds over Palma and less numerously over the smaller towns. The earliest date I have noticed them was while crossing from Minorca to Majorca on 29 March, 1920, and several were over the Albufera on 1 April of that year.

Included in v. Jordans' list.

100. Micropus melba. Alpine Swift.

I saw several of this species in the company of common Swifts, flying over the Albufera on 1 April, 1920, and they appeared to be making for the mountains in the north of the island.

Observed by v. Jordans.

101. Micropus murinus illyricus. Mouse-coloured Swift.

Obtained by v. Jordans and Witherby. Probably breeds; but among the hundreds of *M. apus* seen at Palma and in other places I have not yet observed this species.

102. Caprimulgus europæus. Nightjar.

A summer visitor, arriving at the beginning of May, but not very common. Whilst standing on the balcony of the inn at Puerto Alcudia in the evening of 11 May, 1921, one of these birds swept close past me up the village quay. I flushed a pair in the woods near San Luis on 13 May, 1921, and a single bird in the pine-woods on the shore on 21 May, 1921. One was caught in some fishing-nets, in the summer of 1920, hung up to dry in Puerto Alcudia; the species has also been noticed near Palma.

Included in v. Jordans' list on Barcelo's authority, and from a stuffed specimen seen in Arta.

103. Merops apiaster. Bee-eater.

To anyone acquainted with the summer birds of Spain, the merry Bee-eaters are the most noticeable absentees from Majorca. I have only seen one party, which was migrating northwards, on 26 April, 1920, above the pine-woods near the shore of Alcudia Bay. I have looked for them in vain in other parts of the island, but have seen no others, so conclude they do not stay in Majorca and are only stragglers on migration.

Von Jordans obtained a specimen that had been shot near Arta in 1912, and quotes Homeyer and Barcelo as authorities for its occurrence.

104. Upupa epops. Hoopoe.

A summer visitor, arriving in March and April, and though numbers pass through the district on migration, only a small proportion remain to nest. A few stay throughout the winter.

Found nesting by v. Jordans.

105. Alcedo ispida. Kingfisher.

A common winter visitor in snitable localities, but all leave the district in the spring. Plentiful in the Albufera and on the adjacent streams, and I have seen them fishing in the tanks in which water is stored from the water-wheels for irrigation, as well as on the sea-coast.

Included in v. Jordans' list on Barcelo's authority.

106. Coracias garrulus. Roller.

Included in v. Jordans' list on Barcelo's authority.

107. Tyto alba. Barn-Owl.

Occurs sparingly in the district. I found two dead specimens in the pine-woods on the shores of Alcudia Bay in April 1920, from one of which a Wren had taken feathers to line its nest.

On 4 May, 1921, I flushed one from a small pine in the wood, but I know of no possible nesting-place anywhere near. A pair inhabit the tower of Alcudia Church, and are said to drink the olive-oil from the lamps on the shrines; hence their native name "Oliva" (olive). This species has also been observed in the neighbourhood of Palma.

Von Jordans obtained this species.

108. Asio otus. Long-eared Owl.

109. Asio accipitrinus. Short-eared Owl.

110. Strix aluco. Tawny Owl.

Von Jordans includes the above three species in his list, but they might well be omitted, as there is no recent record of their occurrence in the island, and Barcelo's notes on these species are questionable.

111. Otus scops. Scops Owl.

Not uncommon. Its monotonous piping note may be heard at night in most parts of the district, and indeed in most parts of the island, even throughout the winter. I have frequently flushed them from the shelter of some tree or ruined building, and found one that had been killed by a cat outside the walls of Alcudia.

Included in v. Jordans' list.

112. Carine noctua. Little Owl.

I have never seen this species, but have heard its cry in the neighbourhood of Puerto Alcudia, where one individual took up its quarters during the autumn of 1920.

Included in v. Jordans' list.

113. Vultur monachus. Black Vulture.

The Black Vulture is numerous and resident in all the mountainous parts of Majorca, and it is a mystery how these great birds find sufficient food; no doubt they do not live entirely on carrion-sickly sheep or young lambs are not allowed to die natural deaths in the hills where these vultures are numerous. I know of one instance at the Cabo de Menorea when five vultures were driven away from a dying lamb by some fishermen, who secured the lamb and took it home. Two pairs and an odd bird of this species inhabited the hills around the Atalaya de Alcudia, and were seen almost daily going round their regular beats over the hillsides, the Albufera and marshes, and the pine-woods on the shore. A favourite perch was the ruined watch-tower on the summit of the highest peak. On 14 January, 1920, I watched one of these pairs mating; and at the end of March both pairs had taken up their nesting-quarters in the crags, one pair having selected a cavern in a precipice immediately above the Cabo del Pinar, and the other pair a ledge in the sheer rock directly beneath the Atalaya—about a mile and a half apart. The odd bird-a young one-had disappeared. On the Pollensa peninsula they are particularly numerous—perhaps the numbers of feral goats there attract them; and one day I saw no less than twelve overhead there.

They invariably discovered me when picnicking among the hills, and circled closely around, eyeing me hungrily. Nor do they confine themselves for nesting entirely to the higher hills; rocky hills of quite low elevation, provided there are sufficient caverns in them, are often frequented. I climbed one day into a cavern in one such low and easily accessible hill, when a Black Vulture swept out and nearly knocked me down the hillside.

Observed by v. Jordans.

114. Gyps fulvus. Griffon Vulture.

Von Jordans includes this species on the authority of the Archduke Ludwig Salvador, but I have never come across it in the district. In May 1920 at Lerida, in Catalonia, I saw one that was much concerned with an aeroplane above the town, and followed it about with interest.

115. Neophron percnopterus. Egyptian Vulture.

This is a resident species, but not common. Only one pair inhabited the Alcudia district, and had their quarters, in 1920, in the crags around the Atalaya de Alcudia, frequently visiting the Port and marshes in search of food. In 1921 they appeared to have shifted their quarters to the rocky hills on the west side of Alcudia Bay, and a favourite perch of theirs was the sea-mark—a pillar of stone—on the sea-shore near the Port.

Observed by v. Jordans.

116. Circus æruginosus. Marsh-Harrier.

A common resident in the Albufera and less so in the Albuferete. They nest among the dense reed-beds in these marshes.

Observed by v. Jordans.

; 117. Circus cyaneus. Hen-Harrier.

Included by v. Jordans, who observed a pair near Lluch.

118. Circus pygargus. Montagu's Harrier.

Von Jordans obtained a specimen.

119. Buteo buteo. Buzzard.

Seen on a few occasions, more often in the neighbourhood of Pollensa, in the winter, but becoming commoner in April; probably these latter were migrants.

Not observed by v. Jordans.

120. Aquila chrysaëtus. Golden Eagle.

I have frequently seen large Eagles during the winter, which were probably of this species, among the crags of the Alcudia peninsula and over the Albufera and lagoons—those visiting the Albufera came from the mountains in the north. I saw one fiercely attacked by a Raven, which even pitched on the Eagle's back and did not cease its attacks while they remained in sight. On 7 March, 1921, I had a near view of one hunting along a hillside; it eventually perched on a rock, where it remained some time at no great distance from me.

Observed by v. Jordans.

121. Aquila adalberti. White-shouldered Eagle.

I saw a large, dark, White-shouldered Eagle over the Albufera on 20 November, 1919, being pursued by a Herring-Gull.

122. Haliaëtus albicilla. White-tailed Eagle.

Von Jordans includes this species in his list on the anthority of Homeyer and Howard Saunders.

123. Nisaëtus fasciatus. Bonelli's Eagle.

A pair inhabit the crags and cliffs of the Alcudia peninsula, and the Cabo de Menorea.

Witherby found a pair nesting near Lluch in 1919.

124. Nisaëtus pennatus. Booted Eagle.

This species is a resident, but occurs sparingly. I saw one several times in December 1919, in a piece of fine old pine-forest near the Playa de Muro in Alcudia Bay. During the autumn and winter of 1920–21 and spring and summer of 1921 they were frequently seen about the San Luis woods

and even over the Port of Alcudia, and also in the neighbourhood of Pollensa.

Included in v. Jordans' list on Barcelo's authority.

125. Accipiter nisus. Sparrow-Hawk.

I saw a specimen on 29 December, 1919, in the pine-woods near the Cabo de Menorca, chasing a Thrush; and another on 18 March, 1921, in the pine-woods on the shore of Alcudia Bay.

Observed by v. Jordans.

126. Milvus milvus. Kite.

Two pairs only inhabit the immediate vicinity of Alcudia, and one or other of them visited the harbour and marshes almost daily in search of food, and often snatched up refuse from the surface of the water to devour on the wing. One pair had apparently made their home in the woods among the hills to the west of Puerto Alcudia, and the other pair near the "Victoria" on Pollensa Bay. I was unable to find their nests in any of the trees, and am inclined to think they were nesting in the crags; for on the southern shore of Alcudia Bay a pair were building on a ledge of rock, on a rocky bluff, at the mouth of a torrente, beyond Picafort, on 29 April, 1920.

Obtained by v. Jordans.

127. Milvus ægyptius. Egyptian Kite.

Included in v. Jordans' list on Barcelo's authority.

128. Milvus migrans. Black Kite.

Not common; examples were seen near Pollensa on 9 February, 1920, and a pair near Alcudia on 14 April, 1920. Included in v. Jordans' list.

129. Falco peregrinus. Peregrine Falcon.

Peregrines were noticed chiefly in the winter, when duck were plentiful in the lagoons and marshes, but a pair of large dark-coloured Falcons were seen hunting over the woods and hills to the west of Puerto Alcudia on 4 May, 1920, and a single example of the same species in the Albufera on 1 April, 1920. In May 1921 a pair were nesting on a precipice in the hills to the west of Alcudia, and there was also another pair in the cliffs of the Cabo del Pinar.

Observed by v. Jordans.

A rather smaller and redder species of Falcon than the Peregrine was frequently seen during the winter in the district, chasing the Duck on the lagoons or worrying the Marsh-Harriers, and the same species were seen persecuting the tame Pigeons above the town of Palma. They were so exceedingly wary that I could not procure a specimen.

130. Falco subbuteo. Hobby.

Included in v. Jordans' list on Barcelo's authority. Witherby also noticed it.

131. Falco æsalon. Merlin.

A female was seen in the Alcudia marshes on 28 December, 1919.

Not observed by v. Jordans, but he notes a specimen in the Instituto Balear at Palma.

132. Falco eleonoræ. Eleonora's Falcon.

I have not yet satisfactorily identified this species in the district, but v. Jordans includes it in his list and Witherby observed it in July 1919.

133. Falco vespertinus. Red-footed Falcon.

Included in v. Jordans' list.

134. Falco tinnunculus. Kestrel.

A few pairs of Kestrels inhabit the district, but they are by no means numerous. They nest usually among the crags in the hills and in the sea-cliffs; one pair breeds every year in the Torre Mayor at Puerto Alcudia. They have young in May.

Observed by v. Jordans.

135. Falco naumanni. Lesser Kestrel.

I have never yet seen this species, but v. Jordans has observed it.

136. Pandion haliaëtus. Osprey.

Two or three pairs are resident in the district, one pair nesting on the cliffs on the southern face of the Cabo del Pinar and another pair on the cliffs of the Alcudia peninsula on Pollensa Bay. I have seen as many as five fishing on the lagoons near Puerto Alcudia at the same time, and a pair or more were daily on these lagoons or on the Bay near the Port, either fishing or perched on the posts in the lagoons or on the sandbanks in the Bay, near the flocks of gulls there. At the end of April the birds carried their prey away to the cliffs of the peninsula, where probably they had young ones. This species is found pretty generally all round the coast of the island.

Obtained by v. Jordans.

137. Phalacrocorax carbo. Cormorant.

Resident, nesting on the cliffs of the Cabo de Menorca and round to the Cabo del Pinar. During the winter a large flock fished daily in the lagoon behind the pine-woods inland from Alcudia Bay, and then returned every night to roost at a certain spot on the crags and among the stunted pines on the cliffs of the southern face of the Cabo del Pinar, sharing their roosting-place with an equal number of Herons; and when I visited this place in January 1920 about a hundred of each species were there—some of the Herons fast asleep on the crags and in the caverns of the cliff, and many of the Cormorants too lazy to fly away. Both species nest at this spot—the Cormorants on the cliffs, and the Herons either on the cliffs or in the pine-trees. When the harbour of Alcudia is quiet, in bad weather or on feast-days, Cormorants come right into the harbour and are sometimes caught in the nets.

Obtained by v. Jordans.

138. Phalacrocorax graculus desmarestii. Shag.

Not very plentiful. Two or three pairs nest together at various spots scattered along the same cliffs as those in which the Cormorants breed, and they roost in the winter at their nesting-places. None are ever seen in the lagoons, but

they frequent the harbour of Alcudia, as well as the small bays and inlets of Alcudia and Pollensa Bays. After heavy gales they are found frequently dead upon the shore.

Included in v. Jordans' list.

139. Pelecanus onocrotalus. White Pelican.

Von Jordans quotes a record of its occurrence in the Albufera in 1773.

140. Anser anser. Grey Lag-Goose.

A rare winter visitor. I saw one on the lagoons near Puerto Alcudia on 19 February, 1921, and heard a wild Goose of some sort passing over the Albufera on 28 February, 1920.

141. Anser fabalis. Bean-Goose.

Included by v. Jordans on Barcelo's authority.

142. Cygnus cygnus. Whooper Swan.

Von Jordans quotes a record of Barcelo's of its occurrence in the Albufera in 1864.

143. Anas platyrhyncha. Wild Duck.

Common and resident. During the winter large flocks frequent the Albufera and adjacent lagoons as well as the Albuferete, and I have seen miles of Duck in Aleudia and Pollensa Bays during calm weather. The majority depart in early spring, but a considerable number remain to nest in the marshes and pine-woods near the shore. In March and April I have found their nests in the pine-woods in thickets of heather, myrtle, butcher's broom, etc.; but they are much sought after by the natives, who, if possible, kill the Duck and take her eggs. The eggs are rather smaller than British specimens.

Obtained by v. Jordans.

144. Anas strepera. Gadwall.

Included by v. Jordans on Barcelo's authority.

145. Querquedula querquedula. Garganey.

Occurs in small numbers in the spring. A male was shot out of a flock of seven on 25 March, 1921, at Puerto Alcudia.

Not observed by v. Jordans, who quotes Barcelo.

146. Querquedula crecca. Common Teal.

Plentiful in the winter in the Albufera and lagoons, and in lesser numbers in the Albuferete, but I have never seen any late enough in spring to suppose they might nest.

Included in v. Jordans' list.

147. Mareca penelope. Wigeon.

Large flocks frequent the lagoons in the winter and resort to the bays of Alcudia and Pollensa during the day, but all depart in early spring. They rarely visit the reedy swamps of the Albufera.

Included in v. Jordans' list.

148. Spatula clypeata. Shoveler.

Von Jordans includes it on Barcelo's authority.

149. Dafila acuta. Pintail.

Great numbers in the Albufera and lagoons, near Alcudia, in the winter, generally associating with Wigeon. Some remain in the district later than the other winter Ducks, and I have seen them on the sand-banks in Alcudia Bay as late as the middle of April.

Included by v. Jordans on Barcelo's authority.

150. Netta rufina. Red-crested Pochard.

Von Jordans includes this species on the authority of Homeyer; but Barcelo's notes are not applicable in these days, nor are they at all so in the case of—

151. Nyroca nyroca. White-eyed Pochard.

152. Nyroca ferina. Pochard.

Included in v. Jordans' list.

153. Nyroca fuligula. Tufted Duck.

Occurs in small numbers in the winter in the Albufera and lagoons; generally associating with the Coots, but none remain to nest.

Included in v. Jordans' list.

154. Glaucion clangula. Golden-Eye.

Included by v. Jordans on Barcelo's authority.

- 155. Mergus merganser. Goosander.
- 156. Mergus serrator. Red-breasted Merganser.

During the wet autumn and winter of 1920-21 several small parties of both these species frequented the lagoons and inundation, near Puerto Alcudia, as well as the mouths of the streams running into Alcudia Bay.

Von Jordans quotes Barcelo as the authority for the occurrence of both these species, as well as for—

- 157. Mergellus albellus. Smew.
- 158. Phænicopterus antiquorum. Flamingo.

Whatever may have been the case in former years, the Flamingo certainly does not now breed in Majorca; possibly it may rarely occur on migration. I know of no localities where it would be likely to remain for any time.

Included in v. Jordans' list.

159. Ardea cinerea. Heron.

During the winter quantities of Herons inhabit the Albufera and lagoons, and stand in rows along the dykes and ditches, and also frequent the sand-banks in Alcudia Bay. They roost on the cliffs of the Cabo del Pinar, with the Cormorants, and some nest. A few pairs evidently nest also in the reed-beds of the Albufera, but the recesses of this great swamp are quite inaccessible in summer, being covered with dense thickets of reeds growing in water more or less deep. Some pass over the district on spring migration.

Observed by v. Jordans.

160. Ardea purpurea. Purple Heron.

Arrives in April in small numbers in the Albufera, where it breeds; but only visits the Albuferete on passage, as this marsh is now so curtailed in size.

Observed by v. Jordans.

161. Egretta alba. Great White Heron.

Von Jordans remarks on Barcelo's note on this species.

162. Egretta garzetta. Little Egret.

Observed by v. Jordans.

163. Ardeola ibis. Buff-backed Heron.

On 12 January, 1920, one of these birds flew into the Albufera and settled among some cattle grazing in a shallow part; it was evidently a stranger, as the cattle were alarmed at its appearance; but it did not remain long before continuing its flight southwards.

Not included in v. Jordans' list for Majorca.

164. Ardeola ralloides. Squacco Heron.

Von Jordans quotes Barcelo.

165. Nycticorax nycticorax. Night Heron.

On 24 March, 1921, I disturbed a party of these birds among the pine-woods between the Albufera and Alcudia Bay. I came across them frequently afterwards in the same woods up to the end of May, and quite expect they nested in the neighbourhood.

Included by v. Jordans on Homeyer's authority.

166. Botaurus stellaris. Bittern.

A common resident in the Albufera, where its "booming" may be heard, both by day and night, at most seasons of the year. It occasionally strays into the adjacent lagoons, where I have seen specimens shot.

Obtained by v. Jordans.

167. Ciconia ciconia. White Stork.

168. Platalea leucorodia. Spoonbill.

Von Jordans includes these species on Barcelo's authority.

169. Plegadis falcinellus. Glossy Ibis.

Included in v. Jordans' list on Homeyer's authority.

170. Grus grus. Crane.

Included in v. Jordans' list on Barcelo's authority.

171. Anthropoides virgo. Demoiselle Crane.

Von Jordans quotes Barcelo regarding the occurrence of this species.

172. Balearica pavonina. Crowned Crane.

Included in v. Jordans' list; but Howard Saunders' remark that it has "never occurred" is probably correct.

173. Œdicnemus œdicnemus. Stone-Curlew.

Resident and not uncommon. Small parties frequent the sea-shore, fields, and marshes near Puerto Alcudia, and Pollensa Bay in the winter, and scattered pairs nest on open sandy spots among the pine-woods on the shores of Alcudia Bay and on the rocky fields near the lagoons. In the pine-woods the eggs are generally laid at the foot of a small pine-tree rather than in the open, where they would run the risk of being destroyed by cattle. Like most Plovers, they make a number of scrapes before deciding in which one to deposit their eggs.

Obtained by v. Jordans.

174. Glareola pratincola. Collared Pratincole.

Included in v. Jordans' list on the authority of Homeyer and Barcelo.

175. Scolopax rusticola. Woodcock.

A winter visitor, found sparsely throughout the whole district, arriving in October and remaining sometimes until the latter part of March. They are most plentiful in the pine-woods on the shore of Alcudia Bay among the thickets of myrtle, juniper, heather, rosemary, etc.; but I also have flushed them in the uncultivated parts, among the orchards, in the woods among the hills, on the barren Cabo de Menorca, and in the cane-brakes on the bunds in the Albufera, and I have seen them flighting in the evening to the Albufera from the adjacent hills.

Included in v. Jordans' list.

176. Gallinago gallinago. Common Snipe.

Found in quantities during the winter in the Albufera and Albuferete, and adjacent country. A good many are still in the swamps at the end of April, but I have not yet discovered signs of their nesting.

Observed by v. Jordans.

A specimen of Sabine's Snipe was shot in the Albufera on 27 February, 1920, but was so mangled by the dog that retrieved it that it was not possible to preserve it.

177. Gallinago media. Great Snipe.

Included in v. Jordans' list on the authority of Barcelo.

178. Limnocryptes gallinula. Jack Snipe.

A few occur in the winter in the same localities as the Common Snipe, but they are not abundant. I trod on one once in the Alcudia marshes; it left some of its feathers beneath my foot.

Included in v. Jordans' list.

179. Calidris canutus. Knot.

Some small parties of this species frequented the marshes near Puerto Alcudia in October and November, 1920.

180. Erolia minuta. Little Stint.

On 20 May, 1921, I shot an example in the marshes near the Port; two others were near it and were absurdly tame. They were still about on 26 May, and associated sometimes with the Kentish Plovers.

Obtained by v. Jordans.

181. Erolia alpina. Dunlin.

Observed by v. Jordans.

182. Erolia ferruginea. Curlew-Sandpiper.

Included in v. Jordans' list.

183. Crocethia alba. Sanderling.

Witherby observed this species in July 1919 at Alcudia.

184. Philomachus pugnax. Ruff.

A flock of four or five individuals frequented the shores of Alcudia Bay all the winter of 1919-20 until the beginning of April 1920. They were always wild and unapproachable.

Von Jordans quotes Homeyer and Barcelo.

185. Tringa totanus. Redshank.

Common in the Albufera and adjacent marshes during the winter. A good many were still in the district at the end of May, and I think it is probable that some breed there.

Observed by v. Jordans.

186. Tringa erythropus. Spotted Redshank.

187. Tringa nebularia. Greenshank.

Von Jordans admits both these species to his list on the authority of Homeyer and Barcelo.

188. Tringa hypoleuca. Common Sandpiper.

Occurs in small numbers throughout the winter, even on the shore at Palma below the Almudaina. I have observed them in pairs in the district at the end of May, so possibly some breed here.

Observed by v. Jordans, and though he speaks of it as a breeding species, the nest and eggs have yet to be obtained from the island.

189. Tringa ochropus. Green Sandpiper.

Found singly or in pairs in suitable localities, especially in the Albufera, during the whole winter, and some were still there at the end of May.

190. Tringa glareola. Wood-Sandpiper.

Occurs sparingly in the Albufera during the winter and late in the spring.

Obtained by v. Jordans.

191. Limosa limosa. Black-tailed Godwit.

Included in v. Jordans' list on Homeyer's and Barcelo's authority.

192. Numenius arquata. Curlew.

An odd bird or two frequent the shores of Alcudia Bay and adjacent lagoons and marshes all the winter and up to May. It also occurs sparingly on other parts of the coast.

Included in v. Jordans' list.

193. Numenius phæopus. Whimbrel. Included in v. Jordans' list.

194. Numenius tenuirostris. Slender-billed Carlew.

Admitted in v. Jordans' list on the authority of Homeyer and Barcelo; but many of the statements made by these two writers on Majorea birds are so improbable that it is not possible to rely on them, and they are better omitted.

195. Himantopus himantopus. Black-winged Stilt.

I saw a single example of this species on the lagoons near Alcudia on 14 April, 1921.

Von Jordans found it breeding in the island.

196. Recurvirostra avocetta. Avocet.

Included by v. Jordans on Barcelo's authority.

197. Charadrius apricarius. Golden Plover.

Some small flocks were seen among the Peewits in the Albufera during the winter and early spring.

198. Squatarola squatarola. Grey Plover.

I saw a flock of seven individuals on 14 November, 1919, and several times later during the same winter, in the Albufera and neighbourhood; and also a single bird on the sand-banks in Alcudia Bay on 18 November, 1920.

199. Ægialitis hiaticula. Ringed Plover. Observed by v. Jordans.

200. Ægialitis alexandrina. Kentish Plover.

A very common and confiding bird, found during all the year, round the shores of Alcudia Bay, in the Albufera, the Alcudia marshes, as well as at the Albuferete and the lower end of Pollensa Bay. Their numbers are considerably augmented in spring by birds arriving to breed. They nest abundantly in a variety of situations—on the sandy shores of the bay, on the dried mud of the lagoons, in the marshes, on the fields, and even on the sandy cart-tracks leading to the shore and on the roadside bounding the shore close to

Puerto Alcudia. The birds pair about the middle of February, and in 1920 I found the earliest eggs on 10 Apriltwo nests with fresh eggs and one with eggs considerably incubated; but in 1921 the first nest was found on 27 March with fresh eggs. The eggs are always difficult to find, being often half buried in the sand, with usually no nest beyond a mere scrape; but nests made on the mud in the marshes or on dry patches inland have generally a number of small stones or pieces of dried mud arranged around and beneath the eggs. In the marshes they are invariably laid on the edge of an open space beneath a tiny stalk of samphire. On the sand the footprints of the birds show the whereabouts of their nest, and generally there are several "scrapes" near by, which have not been utilised for laying in. Several nests were found close to Puerto Alcudia on the sandy shore, where sometimes as many as fifty carts were being loaded with seaweed, and numbers of nests are destroyed by the traffic. One pair of birds tried to nest on a threshing-floor near the Port, but were driven away when the floor was swept for use. Another pair laid their eggs on the top of a low wall bounding the shore. The birds are seldom demonstrative when their nest is approached, the hen bird usually running quietly away from her eggs. The eggs vary very much, one type being very light stone-colour, with small spots of black, brown, and grey. Another type has a dark ground, thickly scrawled with dark black and brown. Some closely resemble eggs of the Little Ringed Plover. The note is a sharp "twit" or "chirrup."

Obtained by v. Jordans.

201. Ægialitis dubia. Little Ringed Plover.

This species is evidently of very rare occurrence, for during 1919 and 1920 I never came across it; but early in March 1921 a few small parties passed through the district, and on 16 March I took a nest with three eggs—an extraordinarily early date considering the inundated state of the country—made on the dried mud of the marshes near the shore, at the side of a small plant of samphire. The birds had entirely disappeared the next day, but on 4 May I found

two pairs nesting in a sandy ravine which divides the pinewoods on the further shores of Alcudia Bay. One pair apparently had young, but I found a nest of the other pair with four eggs, nearly ready to hatch, laid on the sand in a scrape, with a few small pieces of coral and shells, on the top of a hillock among scanty, scrubby herbage. On visiting this spot again on 21 May, I found a similar nest with four eggs, evidently belonging to the same pair of birds. The eggs from both these nests were finely pointed and of a light greyish colour, covered with small dark spots, but, after blowing, the ground-colour changed to light buff. The behaviour of the birds at their nest is totally different from Kentish Plovers, which are not demonstrative whilst they have eggs; but the Little Ringed Plover flies wildly round and round, twisting and doubling and uttering its wild whistle, or else runs frantically about on the ground, whistling plaintively. With a larger series of Little Ringed Plovers' eggs from Majorca, I shall be able to show that these eggs often closely resemble some examples of the Kentish Plover, as I have shown that many of the Kentish Plovers' eggs closely assimilate to those of the Little Ringed Plover. The eggs of the three Little Ringed Plovers taken on 16 March were of a totally different type from those taken on 4 and 21 May.

Included in v. Jordans' list on Homeyer's authority, who writes of it as being the rarest Plover.

202. Vanellus vanellus. Lapwing.

Large flocks inhabit the Albufera and neighbourhood during the winter, but all leave the district in the beginning of March. Smaller quantities are found in the Albuferete in the same season.

Included in v. Jordans' list.

203. Hæmatopus ostralegus. Oystercatcher.

A small party frequented the sand-banks in Alcudia Bay from 11 April, 1920, and were still in the district on 3 May, but later I did not observe them.

Included in v. Jordans' list.

204. Arenaria interpres. Turnstone.

Included in v. Jordans' list.

205. Larus canus. Common Gull.

Included in v. Jordans' list on the authority of Barcelo.

206. Larus cachinnans. Yellow-legged Herring-Gull.

This is the only resident Gull, and is found in comparatively small numbers. Scattered pairs nest on the cliffs of the coast.

Obtained by v. Jordans.

207. Larus marinus. Great Black-backed Gull.

A few immature specimens were noticed during the winter.

Included in v. Jordans' list on the authority of Barcelo.

208. Larus fuscus. Lesser Black-backed Gull.

A few examples, both mature and immature, of this species were observed during the winter.

Included in v. Jordans' list on Barcelo's authority.

209. Larus melanocephalus. Mediterranean Black-headed Gull.

I did not identify this species until 11 April, 1921; they were then easily distinguishable from *Larus ridibundus* by their black heads.

210. Larus ridibundus. Black-headed Gull.

Common during the winter in the Albufera and marshes and on the coast, and remaining until the end of March or middle of April, when they have completely assumed their brown hoods.

Obtained by v. Jordans.

211. Larus minutus. Little Gull.

An immature example of this species, in handsomely marked plumage, frequented a lagoon in the marshes near Puerto Alcudia for some time at the end of March and beginning of April.

212. Larus audouini. Audouin's Gull. Included in v. Jordans' list.

213. Larus gelastes. Slender-billed Gull.

On 21 May, 1921, I saw a Gull, which I believe to have been of this species, with some Herring-Gulls on a lagoon near Puerto Alcudia.

214. Gelochelidon nilotica. Gull-billed Tern. Included in v. Jordans' list on Barcelo's authority.

215. Sterna hirundo. Common Tern.

A small party of these birds were fishing in Alcudia Bay on 11 April, 1921, but had passed on by the next day. Included in v. Jordans' list on Barcelo's authority.

216. Sterna minuta. Little Tern. Included in v. Jordans' list on Homeyer's authority.

217. Sterna caspia. Caspian Tern.

I saw an example of this species on 28 April, 1920, flying northwards over the Albufera and lagoons.

218. Sterna sandvicensis. Sandwich Tern. Included in v. Jordans' list on Barcelo's authority.

219. Hydrochelidon nigra. Black Tern.

220. Hydrochelidon leucoptera. White - winged Black Tern.

Both these species are included in v. Jordans' list on Barcelo's or Homeyer's authority.

I may remark that, with regard to the Terns particularly, the quotations that v. Jordans has inserted in his list from earlier observers are, in these days, utterly inapplicable.

221. Catharacta skna. Great Skua.

I saw one on 29 March, 1920, half-way between Minorca and Majorca, among Herring-Gulls, some way astern of the steamer.

Included in v. Jordans' list on Homeyer's authority.

222. Alca torda. Razorbill.

Von Jordans states it was obtained near Arta in 1913.

223. Uria troile. Common Guillemot.

Included in v. Jordans' list.

224. Fratercula arctica. Puffin.

Many frequent the Bay of Alcudia and the sea between Minorca and Majorca, and a few Pollensa Bay, during the winter up to the end of March; they never venture near the land.

Included in v. Jordans' list.

225. Thalassidroma pelagica. Storm Petrel.

Included in v. Jordans' list.

226. Puffinus p. yelkouan. Levantine Shearwater *.

Frequent in Alcudia and Pollensa Bays and neighbouring sea all the year. In January 1921, when in a boat between the Cabo de Menorca and the Cabo del Pinar, one of these birds suddenly appeared close to the boat, diving around and beneath it in a frenzied manner and following any object thrown to it, until it was touched by an oar, when it took to flight.

Observed by v. Jordans.

227. Puffinus kuhli. Mediterranean Great Shearwater.

The most abundant sea-bird in the Bays of Alcudia and Pollensa and adjacent sea all the year; many are caught by fishermen in their nets.

Observed by v. Jordans.

Both the above Shearwaters nest sparingly on the coast of Majorca and neighbouring islets, but more abundantly in Minorca and its islands.

228. Podiceps cristatus. Great Crested Grebe.

Several examples frequented the Bay of Alcudia and adjacent lagoons during the winter of 1920-21.

Included by v. Jordans on Barcelo's authority.

^{*} See note on p. 676.

229. Podiceps griseigena. Red-necked Grebe.

I observed this species in small numbers on the lagoons near Puerto Alcudia in November 1921.

Included by v. Jordans on Barcelo's authority.

230. Podiceps auritus. Eared Grebe. Included in v. Jordans' list.

231. Podiceps nigricollis. Black-necked Grebe.

This species frequents the lagoons in the neighbourhood of Puerto Alcudia during the winter in small numbers, and though they do not remain to breed on these pieces of water, they probably remove to the Albufera adjoining for that purpose.

232. Podiceps ruficollis. Little Grebe.

Not uncommon in suitable localities; there were numbers in the Albufera all the year which strayed on to the adjacent lagoons during the winter.

The Grebes, when attacked by Marsh-Harriers, dive hurriedly, splashing the water high into the air, possibly with the idea of driving off their pursuer.

233. Rallus aquaticus. Water-Rail.

Fairly plentiful in suitable localities all the year.

Obtained by v. Jordans.

234. Porzana porzana. Spotted Crake.

Nearly as plentiful as the last-named, and a good many are shot in the autumn.

Included in v. Jordans' list on Barcelo's and Homeyer's authority.

235. Porzana pusilla. Baillon's Crake.

236. Perzana parva. Little Crake.

Von Jordans includes both these species in his list.

237. Crex crex. Corn-Crake.

Included by v. Jordans on Barcelo's authority.

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238. Gallinula chloropus. Moor-Hen.

Not very numerous and very shy. Observed in the Albufera and in the ditches close to Alcudia all the year.

Included by v. Jordans.

239. Fulica atra. Coot.

Very common in the winter, when large flocks frequent the Albufera, the lagoons, the Albuferete, and the Bays of Alcudia and Pollensa, but their numbers are considerably reduced in the nesting-season. The Marsh-Harriers often make determined attacks on the flocks of Coots and attempt to prey on them, and by swooping above them try to separate a bird from the flock; but the Coots scutter wildly over the water with such a flapping and splashing as can be heard a long way off, and then as quickly as possible assemble together again, while the Harrier retires to rest near by until it renews its assault.

Included in v. Jordans' list on Barcelo's authority.

240. Fulica cristata. Red-lobed Coot.

This species is also included by v. Jordans from Homeyer's and Barcelo's observations; but amongst the numbers of *F. atra* that I have seen or handled, I have never come across *F. cristata*.

241. Porphyrio cæruleus. Purple Gallinule. 'Included in v. Jordans' list.

242. Columba œnas. Stock-Dove. Included by v. Jordans on Barcelo's authority.

243. Columba palumbus. Wood-Pigeon.

This species is a summer visitor to the district, and I did not come across any until 19 April, 1920, when they appeared in the pine-woods among the hills and were busy pairing. In 1921, I noticed the earliest arrivals on 12 March. They are not plentiful, and only resort to those woods where the trees are of good size.

Observed by v. Jordans.

244. Columba livia. Rock-Dove.

A plentiful resident, but very wild. Small parties up to, perhaps, fifty individuals were scattered about in suitable localities along the coast as well as about some of the cliffs inland. One flock had its invariable line of flight from its feeding-grounds inland to the Cabo de Menorca by way of Col Baix, and came rushing up over the tops of the pinewoods, to hurl themselves through the gap to the caverns they frequented in the cliffs beneath. Another party always flew over the pine-woods on the shore of Alcudia Bay towards Pollensa Bay, and along that coast to the Cabo del Pinar. I have occasionally seen flocks feeding in the fields.

Included in v. Jordans' list.

245. Streptopelia turtur. Turtle-Dove.

A common summer visitor, arriving at the end of May and nesting plentifully in the pine-woods on the shores of Alcudia Bay. I found the earliest egg on 21 May, 1921.

Observed by v. Jordans.

246. Alectoris rufa. Red-legged Partridge.

Common on rocky hillsides and scrub-covered ground, but very wild and shy. Very few came into the markets during the very wet winter of 1920-21.

Observed by v. Jordans.

Witherby states that two which I obtained are neither intercedens nor hispanica, the two Spanish forms, but are like the typical form in colour, though a larger series may prove that they are rather smaller.

247. Coturnix coturnix. Quail.

A resident, but not very plentiful. I have not noticed any signs of large spring or autumn migrations. Heard calling in the crops during April and May, and during the winter frequenting also wet, marshy land.

Obtained by v. Jordans.